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You can read more about the site at www.epa.gov/region5/cleanup/allied.

Contact EPA

If you have questions or concerns, please contact EPA:

Michael Berkoff

Remedial Project Manager

Ph

Email

Patricia Krause

Community Involvement Coordinator

Ph

Email

EPA Releases Detailed Report on Potential Cleanup Alternatives for Allied Landfill; Public Availability Sessions Coming This Fall

U.S. Environmental Protection Agency has completed the “feasibility study” for the Allied Landfill portion of the Allied Paper/Portage Creek/Kalamazoo River Superfund Site. This feasibility study (FS) is a detailed description and analysis of potential cleanup options for a site. EPA does not propose a specific remedy in the FS. EPA will issue a separate document, the Proposed Plan, to present EPA’s preferred cleanup plan for Allied Landfill to the public. EPA does not have a release date for the Proposed Plan.

EPA will be hosting an information session to talk about the cleanup options later this fall. This information session will be held on XXXX at XXX from XXX to XXX.

Cleanup Alternatives for Allied Paper Landfill

The Allied Paper Landfill is part of the Allied Paper/Portage Creek/Kalamazoo River Superfund site. Allied Paper Landfill occupies 89 acres including Portage Creek between Cork and Alcott streets in the City of Kalamazoo.

More information is on the web page at www.epa.gov/region5/cleanup/allied. The feasibility study is a large document and the version on the website does not include appendices. You can call or email either Patricia Krause or Michael Berkoff for a CD of the study. Contact information is on the left-side of this fact sheet and also on the web site.

Contamination

A study of the nature and extent of contamination at the site was completed for the Allied Paper Landfill in 2008. This study known as the remedial investigation focused on polychlorinated biphenyls (PCBs). The PCBs at the landfill are associated with paper residuals and come from the past recycling of carbonless paper. PCBs are the primary contaminant at Allied Landfill. The other pollutants identified to a lesser extent were metals and semi-volatile organic compounds.

Evaluating Cleanup Alternatives

EPA completed the feasibility study for the Allied Paper Landfill which details and compares the cleanup alternatives that may be implemented at the landfill. The cleanup alternatives included in the report are: no further action (this is required at all sites); consolidation and capping; removal and disposal; and encapsulation and containment.

EPA has established what is called preliminary remediation goals for PCBs in soil, ground water and sediment. Exceeding those levels requires that action be taken. These levels should be used to define the area where some action is considered necessary to protect people's health and the environment.

All of the cleanup alternatives, if properly implemented, would be protective of people's health and the environment over time. EPA will further evaluate these alternatives and select the one that best meets the criteria of being protective in the short and long term, using treatment to reduce toxicity or mobility, and being cost-effective.

Common Elements of the Cleanup Alternatives

All of the alternatives (except the no-action one) require excavation of contaminated material in the former operations area near Alcott Street and contaminated material east of Portage Creek, like at the Goodwill property and nearby residential properties. The different cleanup alternatives require different amounts of excavation in the other parts of the site. These differences are described below.

Before any excavation, EPA will be sampling soil and sediment to find the exact footprint of contamination. If the samples show levels of PCB contamination above the appropriate preliminary remediation goal, the soil and sediment will be excavated. Once sampling shows PCB are below the appropriate cleanup goal, the areas will be

backfilled with clean material. If the area is a wetland, the wetland will be restored and an environmental covenant will be put in place, requiring that the area remain a wetland. An environmental covenant is a long term land use control of the property.

A five year review of the site is also required whenever waste remains on-site. This will be required for some of the cleanup alternatives. The five-year review evaluates if the cleanup continues to protect people and the environment, and will be every five years in the future.

Below are the cleanup alternatives included in the FS.

Alternative 1 – No action

This alternative must be considered at every Superfund site. It means leaving soil and sediment in place with no engineering or maintenance. Five year site reviews will be part of this alternative.

Estimated cost: \$120,000.

Alternative 2 – Consolidation and Capping

Excavated materials at Allied Landfill will be consolidated in areas of the landfill known as the historical residual dewatering lagoon, the former residual dewatering lagoon, the former Type III landfill and the Western disposal area. There are three versions of this alternative 2A, 2B and 2C. Alternative 2A leaves the Monarch historical residual watering lagoon in place under a cap. Monarch is a disposal area separated from the main body of the landfill (which is made up by those disposal areas listed above) by Portage Creek. Alternative 2B calls for the contaminated material at Monarch to be consolidated into the ~~area described above~~ main body of the landfill. Alternative 2C is the same as 2B except that EPA will also look for areas of extremely high PCB concentrations and if found ship them off-site for incineration.

The consolidated area would be covered with an engineered landfill cap consisting of six layers. The six layers will include (from bottom to top): a non-woven geotextile layer, a sand layer for gas venting, an impermeable plastic liner, a geosynthetic drainage layer, a 24-inch-thick (minimum) drainage and soil protection layer, and a 6-inch-thick (minimum) vegetated, topsoil layer. During the design phase of this alternative, EPA will evaluate the necessity of the existing sheet-pile wall, a wall that extends below ground, stabilizing the toe of the existing landfill. The sheet-pile wall may not be necessary in those cleanup alternatives that would involve pulling back large amounts of material from Portage Creek. The evaluation will determine if the sheet-pile wall can be removed completely or if parts of the wall are still needed to stabilize the base of the landfill along Portage Creek.

At those areas where contaminated material would be excavated and pulled back from Portage Creek, clean material would be put in place to act as a protective buffer. After excavation and pull back to the contaminated material, sampling will take place to make sure that cleanup goals have been achieved. The clean set back between the landfill and Portage Creek would allow room for monitoring wells and potentially a ground water collection system (if the latter is considered necessary). Monitoring the ground water flowing from a landfill is one of the ways that EPA can observe if a cleanup is successful at preventing contamination from moving off-site. EPA would require that these wells be sampled regularly as a part of a long-term monitoring program. This cleanup alternative also includes long-term inspections and maintenance of the newly installed engineered caps and the remaining sheet pile.

Figure 2A

Alternative 2 A: Consolidation and Capping: Monarch Remains in Place

Estimated Cost: \$43 million

Figure 2B/2C

Alternative 2B: Consolidation and Capping: Monarch Materials Moved West of Portage Creek

Estimated Cost: \$41 million

Alternatives 2 A and 2B are similar in cost. Alternative 2A costs higher due to the increased operation and maintenance.

Alternative 2C: Consolidation and Capping: Same as 2B with additional Excavation and Incineration

Estimated Cost: \$62 million

Same as 2B along with transporting off-site excavated soil and sediment with highest PCB concentrations. The excavated materials would be incinerated off-site and the cost would increase. It is estimated that five percent of the soils dug up would require offsite incineration.

Alternative 3 – Total Removal and Offsite Disposal

Estimated Cost: \$189 million

This remedy would involve the total excavation of Allied Landfill. The areas with PCB contaminated material will be identified and then be excavated. This would include all outlying areas and areas of the landfill with PCB contaminated materials. EPA estimates this to include approximately 1.5 million cubic yards of PCB-contaminated

materials. These materials would be dug up and transported offsite to a commercial landfill. PCB-containing materials located under buildings would not be removed. After excavation, sampling will take place to make sure that cleanup goals have been achieved. Wetland areas will be backfilled with clean material and the area will be restored. The excavated and backfilled area will extend over 65 acres. Covenants to maintain wetlands will be put in place.

The total excavation alternative may take several years depending on factors like the size and depth of the contaminated area and the funding available for the cleanup. Since EPA estimates there are about 1.5 million cubic yards of contaminated material at Allied Landfill, total removal could take about five years if 100 percent funding of the cleanup were available. This activity would require local traffic safety precautions as well as cause a greater amount of community disruption. In that scenario, there would be an average of 115 truck trips per day, year-round for five years. If 100 percent funding were not available, the cleanup would extend over a longer period of time.

In addition, the sheet pile wall along the western bank of Portage Creek will be removed along with the ground water treatment system. If there is any contaminated material left under buildings, ground water monitoring will be performed and covenants for land-use will be put in place.

Alternative 4 – Encapsulation Containment System

This alternative involves digging up PCB contaminated materials and encapsulating them in a new landfill on-site, in those areas occupied by the current landfill.

Specifically, this plan would include the construction of a bottom-liner ~~would be constructed~~, spanning the former landfill area. Excavated materials would be placed on the newly constructed landfill liner. A landfill cap, the same cap as in Alternative 2, would cover about 50 acres and would be placed over the new landfill area. There would be some material transported off-site and disposed in other permitted landfills, as not all materials will fit in the landfill.

The sheet pile wall ~~would~~may be removed along the western bank of Portage Creek. Portions of the sheet pile wall will be left for a slope in the landfill and bank stability will be evaluated. Ground water monitors will be located outside areas where waste remains.

Estimated Cost: \$136 million

Next Steps

EPA will be hosting public availability sessions in Kalamazoo during the fall and early winter of 2013. At these meetings, EPA will discuss the site conditions and the potential

cleanup alternatives with the public. These availability sessions will be somewhat different than previous public meetings on the Kalamazoo Site as EPA will use a poster session type format to present the topics. With this ~~format~~change, EPA is seeking to have more individualized and in-depth conversations with the public.

As previously mentioned, the FS ~~is not the remedy selection document for Allied Landfill. The document only details a number of potential cleanup up options for Allied Landfillit.~~ EPA will propose a specific alternative when it issues the Proposed Plan for Allied Landfill to the public. The release of the Proposed Plan will mark the beginning of the public comment period, during which EPA will be collecting public comments (via mail or internet submission) on the proposed remedy. During this period, EPA will be hosting an additional combined public meeting ~~and~~ /hearing on the Proposed Plan. During that event, EPA will ~~be presenting~~ present the proposed cleanup plan and members of the public will have the opportunity to make formal comments to EPA in person. EPA will consider these comments as it selects the remedy for Allied Landfill. EPA has not yet scheduled the date of the Proposed Plan meeting/hearing, but will announce it to the public at least two weeks in advance.